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Civil works budget is $4 billion

President Clinton's budget transmitted to Congress on Feb. 7 includes $4.064 billion for the U.S. Army Corps of Engineers Civil Works program. In addition, the program will include $322 million in non-federal contributions and trust fund receipts.

Funding in this request will continue developing water resources, the efficient operations, maintenance, and management of the nation's navigation, flood damage reduction, and multiple-purpose projects, the equitable regulation of wetlands, and the restoration of important environmental resources.

The budget also begins to address some of the Corps' long-term water resources infrastructure maintenance requirements.

"The President's fiscal year 2001 budget combines three important new initiatives that incorporate a comprehensive approach to watershed/river basin planning, modernization of infrastructure, and non-structural flood hazard mitigation with a significant new investment program," said Dr. Joseph Westphal, Assistant Secretary of the Army (Civil Works).

The budget includes a proposal to establish a Harbor Services User Fee and Harbor Services Fund. Under this proposal, fees would be charged to vessels transiting the harbors of the U.S. These receipts would be placed in the Harbor Services Fund and would be available the following fiscal year for appropriation to fund both construction and operation and maintenance of the nation's channels and harbors.

The existing Harbor Maintenance Tax and Harbor Maintenance Trust Fund would be repealed, and the remaining balance of the Harbor Maintenance Trust Fund would be deposited in the new fund. The budget proposes to appropriate $950 million from the fund in FY01, with $250 million applied to port improvement construction and $700 million to fund operation and maintenance requirements.

The federal fiscal year 2001 budget includes $4.06 billion for the Corps of Engineers' civil works program. (Photo by F.T. Eyre)

The Army budget also includes $20 million for the Challenge 21 Riverine Ecosystem Restoration and Flood Hazard Mitigation initiative. Priorities for this initiative will be developed in partnership with other federal agencies and non-federal public entities.

A budget request of $27 million is included to begin a new program of recreation modernization to upgrade old, obsolete Corps facilities and provide facilities more in line with the demands of the recreational public.

"This budget request is one of the largest we have received and is a good first step in recapitalizing the nation's water resources infrastructure," said Lt. Gen. Joe N. Ballard, Chief of Engineers. "We need to reinvest in this infrastructure to support continued national economic growth, and this budget includes several initiatives that put us on the right course."

The new investment program requires federal funding of $82 million and includes four new reconnaissance studies; four new watershed/river basin studies; one preconstruction, engineering, and design project; one special study; two environmental projects; four flood control projects; two navigation projects; one shore protection project; two major rehabilitation projects; one deficiency correction project; and two new programs.

The total cost of this new investment program is $1.628 billion, of which $413 million would be paid by non-federal sponsors. The two new programs are The Recreation Modernization Program, and the Challenge 21 Riverine Ecosystem Restoration and Flood Hazard Mitigation Program.

The reconnaissance studies, funded at $100,000, are in Butler County, Ohio, for flood damage protection; Currituck Sound, N.C.; and Coastal Ecosystem Restoration and Cape Cod Bays, Mass., for environmental restoration; and a study for navigation improvements for the Commonwealth of the Northern Marianna Islands.

There are four comprehensive river studies:

Continued on page three

Chief addresses study controversy

On Feb. 24, Lt. Gen. Joe N. Ballard, Chief of Engineers, told members of Congress that he stands behind the U.S. Army Corps of Engineers' integrity and its ability to make unbiased recommendations on proposed water resource projects. He said he welcomes and will fully support all independent outside investigations into the Upper Mississippi and Illinois Rivers Navigation Study.

Speaking before the U.S. Senate Subcommittee on Transportation and Infrastructure, Ballard said, "I assure you that when all the facts are in, the integrity of the Corps will be intact, and you will know that the trust you have traditionally placed in the Corps is well founded.

'I assure you that when all the facts are in, the integrity of the Corps will be intact..."

"Recent allegations are very troubling to me as they challenge the very value of the Corps of Engineers to the nation," Ballard said. "That value is *trust* — a trust in our absolute integrity in providing to the administration and Congress, water resource investment recommendations that are unbiased and technically sound."

Ballard vowed to take prompt corrective action if wrongdoing is discovered and to make improvements to the Corps' study processes if warranted.

"Our process has a series of checks and multiple levels of review," he said. "The draft Upper Mississippi Study has not yet been completed. It still faces an independent technical review, a minimum of two formal public reviews, a Washington-level policy review, and state and agency coordination."

Ballard told the subcommittee that technical experts may, and often do, honestly disagree on specifics in complex issues. The value that the Corps brings to the process is to ensure that both sides of any technical disagreement are competently analyzed and receive proper peer review, public review, and policy review.

"Ultimately, after full and open debate, balanced professional judgement must enter the process," Ballard said. "That is the role of our field commanders; they must make tough decisions, often in the face of strongly held opposing views. The Corps' process ensures that all interests are heard and that final recommendations are unbiased, based on the best science available, and in the public's interest."

The screening process discards most potential Corps projects. Historically, only 16 percent of the studies ultimately result in a construction start. Those projects that make it through the screening process and are recommended for construction provide a positive return on the nation's investment.

Ballard emphasized the Corps' published goal of seeking growth opportunities. "We are seeking to identify unmet national water resource needs," he said. "The intent is to strategically target growth to meet emerging Army and national needs.

"Our role is to apply a structured, reasoned approach to identifying and quantifying the nation's water resource needs," Ballard said. "Through an extensive communication process with our partners, stakeholders, other agencies and the general public, we recommend responsible alternatives for national investments that will meet economic development and environmental needs both today and in the future."

(HQUSACE press release.)

New Orleans prepares for hurricanes

By John Hall
New Orleans District

New Orleans District recently began rebuilding bridges to improve hurricane protection in New Orleans' Lakeview section. This will permit vital roadways, now sandbagged during a storm, to remain open.

Last year was the biggest year for flood-proofing in the area, with construction beginning on four bridges. In all, 10 bridges will be floodproofed along three drainage canals in Orleans and Jefferson parishes (counties). Total cost will be about $25 million.

Floodproofing bridges is an indispensable portion of the ongoing $739 million Lake Pontchartrain and Vicinity Hurricane Protection Project. It is being built by the U.S. Army Corps of Engineers and four levee boards in Orleans, Jefferson, St. Bernard, and St. Charles parishes.

In floodproofing, the original bridge is demolished. Each replacement bridge will have steep, concrete sides to continue the floodwall from one side of the canal to the other.

Two of the Lakeview bridges, on Filmore and Harrison Avenue, span the Orleans Avenue Canal, which lies between Lakeview and City Park. Angelo Iafrate Construction has a $2.36 million contract for both of the two-lane bridges.

"We're asked why we're replacing these bridges, just four blocks apart, at the same time," said Col. William Conner, former New Orleans District commander. "The answer is that we've coordinated this work with the neighborhoods and City Hall. They don't want to go through any more hurricane seasons than they have to without floodproofing. This is an encouraging sign that people are taking the hurricane threat seriously."

Floodproofing is vital, said Al Naomi, New Orleans District's senior project manager for the Lake Pontchartrain and Vicinity project. "The new bridges are final links in the chain of protection provided by hurricane levees and floodwalls. Besides keeping water out, we want to keep roadways open. The roadways' value becomes clear when evacuation is required as a hurricane is approaching."

The Orleans Levee District and the East Jefferson Levee District are the local sponsors with the Corps for floodproofing the bridges.

Demolishing existing bridges is required for floodproofing in order to deal with hurricane storm surges, said Kevin Wagner, the Corps' project manager for the Lake Pontchartrain and Vicinity project.

"There's a buoyancy problem," Wagner said. "We want to keep these bridges from popping out if the water rises around them, so we're providing new pilings with the strength to anchor them properly."

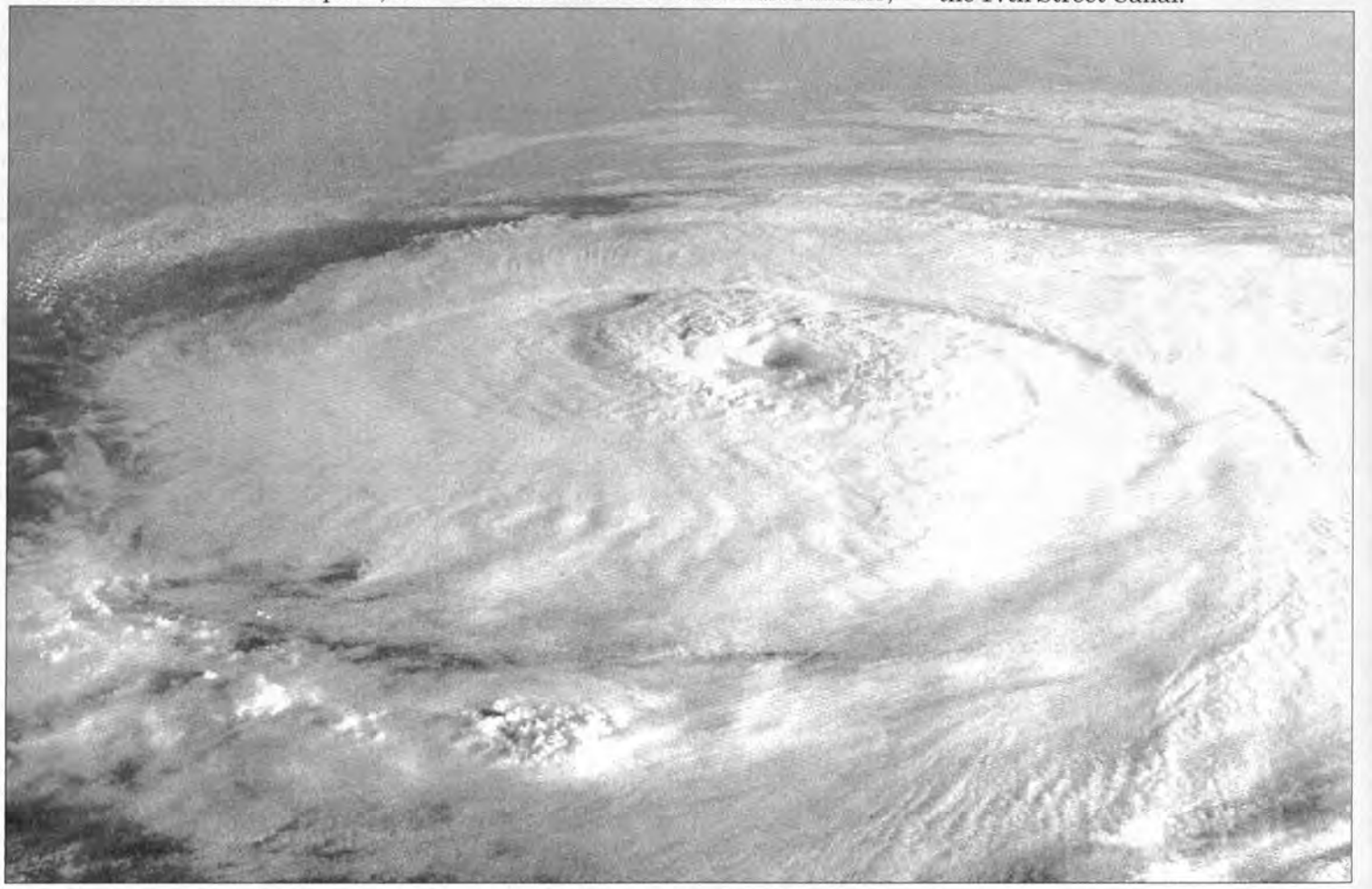
Once construction is complete, the levee districts take over operation and maintenance of the hurricane-protection projects. The levee districts must begin sandbagging and closing floodgates about 36 hours before a hurricane's arrival. Floodproofing the bridges will allow the levee districts to shift their work forces, always stretched thin during storms, to other essential tasks.

The London Avenue Canal Bridge is being replaced as a flood-proofing measure. (Photo by Michael Maples, New Orleans District)

The cost of floodproofing varies with each bridge. C.R. Pittman has a $3.33 million contract for a four-lane bridge now under construction, on Gentilly Boulevard over the London Avenue Canal in New Orleans. Last summer, work began on the four-lane Leon C. Simon Boulevard bridge over the London Canal. Miller Excavating has the $3.86 million contract.

All four bridges begun in 1999 are expected to be finished in a few months. A fifth bridge has already been complete, leaving five to go.

Construction is expected to begin this year on four more bridges. One will increase the capacity of a busy roadway linking New Orleans and Metairie at Lake Ponchartrain. A four-lane bridge will replace the two-lane bridge on Old hammond Highway over the 17th Street Canal.



A weather satellite photo shows the classic shape as well as the size and power of Hurricane Elena in 1985. The hurricane ravaged the Gulf states and caused severe coastal erosion. The Lake Pontchartrain and Vicinity Hurricane Protection Project in New Orleans is designed to reduce such damage in the future. (Photo courtesy of NASA)

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Insights

How to cope with winds of change

By Lt. Col.(P) Tim Carlson
Chaplain, U.S. Army Corps of Engineers

March can be the cruelest month. Cold one day, warm the next, even late blizzards, and always wind that's sometimes mild, and sometimes slices right through the warmest coat. Truly a month of unpredictable change. Also, across the years, I have noted the turbulence that comes in this month, regardless of my geographical location.

Not long ago, I followed my oldest son out of Tulley Gate at Fort Belvoir, Va., and turned onto Route 1. As I followed him across post, I felt turbulence, not really wanting his '86 Volvo to leave my sight, yet wanting for him to be safely on his way. My son was no longer a child or a teenage boy. He was no longer coming home at night to the care of our family. Since his departure last August, he had been *launched.*

For that long, yet short, drive across Fort Belvoir, pride in my son owning the responsibility of college life, his outstanding grades, and paying for his first semester almost by himself, were repressed. Sadness, very much like the grief I felt when my father died nearly 34 years ago, swept over me. It threatened to move me into aching sobs. I looked ahead and saw my son wiping his cheek. There was something comforting in that scene for he, too, was sharing our separate sadness.

For a short time we traveled together on Route 1, one car behind the other, then I pulled alongside him. We pointed our fingers in an affirmation of love, and parted. I headed toward Washington, D.C., and he continued to Chicago and more college. Adapting to the continuing events of our lives is not always easy, much like trying to predict the weather in March.

In many areas of our nation, as spring nears, strong winds often blow. I have mused about this phenomenon from time to time. I am certain, in pensive moments, that winter with its frozen snow and cold would never leave were it not for the strong winds of early spring.

Perhaps in your world of work, you have felt a reluctance to embrace imminent change and its resultant winds. Maybe a new boss, a new job, a new location, a new challenge, or even just a new workstation has come your way. While that can be affirming and energizing, it can also be destabilizing, especially if you like it where you are and feel a professional comfort level in your present condition. Grappling with this juxtaposition is both the challenge and also the future reward.

God has blessed me with tremendous children. My son, whose departure I grieved earlier this year, has for many years also been my bosom friend. When I was selected for the rank of colonel in January, I knew his excitement would equal (if not surpass) mine. I also knew that had I not come to work for the Corps, I might never have had the opportunity to serve God, the nation, and the Army as a senior leader of the chaplaincy. Truly, my taking the path from the Ozarks to Washington, D.C., was a result of some strong winds, like those of March.

My winter of content in Missouri was challenged by a call for a continuing military career. I knew I had to move on to be positioned for another possible promotion which would doubtless lead to yet another challenging work setting.

My intent, in conveying this information, is to challenge all of us. I would like for us to see that the great pain and the resistance to forward motion is normal. It is a fear of parting! It is an almost overwhelming compulsion to cry out, "Stay where you are! Keep the status quo! Don't move!"

Our Corps also has seasons of change. Perhaps for you, this will be a time like March, with winds and threatening uncertainty. I trust that your season, as a valued team member, will be one that experiences the rewards because you were willing to risk taking the hard road, the one most difficult to travel.

As the Corps Chaplain, my prayer is that God will allow you to see that beyond the pain of the changing present lies the desired reward of future service. Therein is our challenge. We must embrace discomfort to experience the objectives we were made to attain. As we follow that leading, our value to God, to our great organization, and to our special nation will be fully realized. Then, what is perceived as the cruelest situation might rather become the greatest fulfillment in our lives.

(The views expressed in this article are those of the author and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. Government.)

Budget

Continued from page one

- Missouri River and Middle Mississippi River Environmental Enhancement, Missouri.
- Rio Grande Basin in Colorado, New Mexico, and Texas.
- White River Basin in Arkansas and Missouri.
- Yellowstone River Basin, Mont.

New construction starts include a deficiency correction in Oates Creek, Richmond County, Ga; two environmental restoration projects — the Hillsboro and Okeechobee Aquifer in Florida, and Rio Salado in Phoenix and Tempe, Ariz.; and four flood control projects — Folsom Dam Modifications at the American River in California; Ohio River in Greenway, Ind.; Rio Grande and Rio Nigua, both in Puerto Rico.

Rehabilitation will begin at Ozark Powerhouse in Arkansas., and Lock and Dam 11 on the Mississippi River in Iowa. Two navigation projects will begin in Baltimore Harbor, and Arthur Kill Channel in New York and New Jersey; and a shore protection project will begin at Assateague Island, Md.

The environmental portion of the proposed budget totals more than $895 million and is about 20 percent of the Corps request. The environmental projects of note are in the following areas. There is $91 million to continue the Columbia River Fish Mitigation program in the Pacific Northwest. There is $158 million for the ongoing effort in South Florida to restore, preserve and protect the Everglades. We have also budgeted $468 million to fund our ongoing environmental restoration continuing programs including Sections 204, 206, and 1135 of various Water Resources Development Acts.

This funding will allow us to implement projects to create and restore aquatic habitats and to modify Corps projects to improve the environment. Additionally, the budget contains $140 million for the Formerly Utilized Sites Remedial Action Program (FUSRAP) program that will clean up certain contaminated sites.

Here is a breakdown of the budget:

General Investigation — $137.7 million (funds studies, design, coordination, data collection and research and development).

Construction General — $1.346 billion (funds project construction and major rehabilitation).

Operation and Maintenance, General — $1.854 billion (funds the running and upkeep of existing projects which include hydropower facilities, locks and dams, recreation areas, and navigable waterways).

Regulatory Program — $125 million (funds the Corps permit program for dredge and fill material in the waters of the U.S., partially offset by $7 million from permit fees which depends on enactment of proposed legislation).

Flood Control, Mississippi River and Tributaries — $309 million (funds the study, design construction, operation and maintenance for water resources projects in the alluvial valley of the Mississippi River).

General Expenses — $152 million (funds for the executive direction and management of the Corps of Engineers Headquarters and major subordinate commands such as divisions).

FUSRAP — $140 million (funds for the management of the program transferred to the Corps from the Department of Energy by the Energy and Water Appropriations Act of 1998).

Budget details, including state-by-state information, are available at www.usace.army.mil/inet/functions/cw.

Rapid Response team

'I've never seen any federal agency respond so fast or efficiently.'

By Liam Bickford
Omaha District

"I've never seen any federal agency respond so fast or efficiently before," said Ray McDonald, town manager of Mt. Olive, N.C., as he expressed his community's appreciation for Omaha District's Rapid Response (RR) team.

When Mt. Olive's building inspector Kenny Talton and fire inspector Brian Taylor discovered stored chemicals while inspecting the former Ginn Lumber Co., they immediately notified the N.C. Department of Environment and Natural Resources (NCDENR). City residents and officials were concerned for their safety due to potential exposure to these hazardous materials.

The warehouse housed hundreds of five-gallon containers of paint-related materials. On closer inspection, most of the consstainers had military labeling. The Defense Reutilization and Marketing Service (DRMS) was contacted for assistance since the warehouse owner was deceased.

Immediate response

The RR team is based at the Fort Crook Area Office. At the request of DRMS, they and contractor personnel from the IT Corporation in Monroeville, Penn., mobilized to the site on July 28. RR project engineer Matt Ellender said they initiated this project within 24 hours of first contact. "With hurricane season closing in, timing was critical and the situation called for immediate response," Ellender said.

When they arrived in Mt. Olive, the RR team faced an unknown situation. Inside the decades-old vacant warehouse, team chemist Jim Beran found about 200 five-gallon drums of paints and paint removers. The flammable, corrosive, and toxic chemicals had been stored there for at least 20 years, and the team needed to determine exactly what chemicals where in the building. The warehouse owner had procured the materials from the government 20 years earlier for possible resale, and stored them in the warehouse, stacking the containers four and five high.

The RR team inventoried the waste and segregated the material according to label information. They analyzed samples from the containers to determine their chemical makeup. This information allowed RR to determine the appropriate method of waste disposal and a packaging scheme for shipment to a disposal facility.

After surveying the inside of the building, Beran said, "There were very few containers leaking, and those that were didn't seem to have spread very far. We've dealt with situations a lot worse than this."

They placed caution tape and a security fence around the structure to make it as secure as possible and to prevent any exposure to the public. The containers were old and had deteriorated so badly that some could have burst.

Precautions

The Rapid Resonse team, well equipped with spill kits, removed leaking drums first. "That's always a concern," Ellender said. "That's why we take the precautions we do. You just never know what will happen."

The quick implementation of controls eliminated any need to block streets or evacuate surrounding buildings. The RR team monitored the air with photo ionization detectors, oxygen meters, and explosimeters to test for hazardous conditions. "A lot of the reason for monitoring the air was to protect our own workers," said Ellender. "But if we exceeded any of our action levels, we'd have to shut down and implement controls."

Stacks of leaking, corroded paint-related marterials (left and above) challenged the Rapid Response team in Mt. Olive, N.C. (Photo courtesy of Omaha District)

Final inventory after cleanup revealed that more than 900 five-gallon containers and more than 300 one-gallon containers were packaged and disposed of. The cleanup work involved heavy manual labor.

Larry Perry, Eastern Area Supervisor of the Hazardous Waste Compliance Branch, said the RR team sets "an outstanding example of effective teamwork."

'Just what we do'

"It is just what we do," said Ellender. "We respond to hazardous situations and deal with them. We've assembled a group of highly capable people and that makes it work."

On Aug. 20, the bulk of the material was shipped to the Ross incineration facility in Ohio. On Sept. 9, the remaining overpack drums were shipped to the Safety-Kleen facility in North Carolina. The Rapid Response team had cleaned up and removed all the waste less than a week before Hurricane Floyd flooded the area. Total project time from the first call to the final disposal was just over three weeks. Funding was received just five days after the first call. Business-as-usual would involve 30 to 40 days of response time while reviews and approvals are pending.

Local help

So many players are involved in a clean-up that the process becomes quite involved. "You have to deal with state regulators, local authorities, contractors, and personnel," said Ellender. "Ray McDonald deserves special mention for all his assistance and cooperation. He had the police captain pick me at the hotel when I arrived and he helped with logistics throughout the process. He really gave us a lot of support."

In addition, the fire department filled self-contained breathing bottles for the team. "It doesn't always go like this," Ellender said. "Even after preliminary visits to the site, unknowns still arise that really affect implementation and budgets."

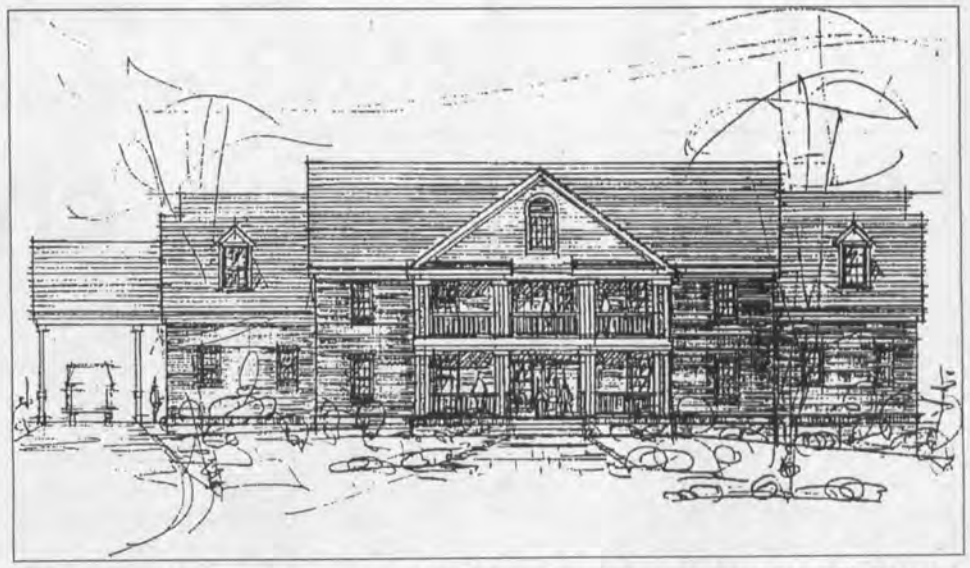
Since most of the chemicals originated from military surplus, the Department of Defense funded the $100,000 clean up. "Mt. Olive would have been economically devastated by the cost of such remediation and disposal," said Perry.

"The cost would have been a real hardship for the town," said McDonald. "Both the state and federal governments would have required the town to remove the chemicals regardless of who paid. It's great that a small community like ours with limited resources can depend on a government agency in a dangerous situation like this.

"Public relations with the media was great," McDonald continued. "The Corps' way of presenting to the public, giving us daily updates and reports was outstanding. The Omaha team really reassured everyone. It was wonderful that they worked as closely with our local government as they did. People should know the real benefits of having someone out there who can clean up such hazardous materials, a team that knows what it's doing and gets the job done."

Building group home is labor of love

By Kim Gillespie
Engineering and Support Center, Huntsville



Building Elkwood Village, an assisted living home for mentally retarded adults, is a labor of love for Bill Brewer. (Photo and art courtesy of Huntsville Center)

Overseeing the development, construction, and administration of a planned community might seem an overwhelming challenge to most, but William (Bill) Brewer is not intimidated. For Brewer, Elkwood Village, which will provide assisted living for mentally retarded adults, it is a labor of love.

Construction started recently on the first residence of the 100-acre site near Ardmore, Ala., and marks more than 15 years of planning. Brewer, an electrical engineer, has worked for Huntsville Center since 1981. He and his wife Evelyn, a registered nurse, saw the need for a private facility for mentally challenged adults in North Alabama when they began researching long-term care for their son Matt, who was born with Down syndrome. Matt is now a 27-year old working adult, but "we needed to make sure he would always have the care he needed," said Brewer.

When Brewer and his wife first began searching for long-term care, they found a facility they liked in Mississippi. But it was more than three hours away. "The facility was perfect, but the distance that would have put between us and Matt was too great," said Brewer. "We have two other sons who also live in this area, and we were thinking about them, too. We knew that there were other families with similar needs in the area, so we decided to develop our own facility here."

Such a vast undertaking meant establishing a non-profit organization and working the business end, while simultaneously working on the master plan. They established a board of directors including Brewer and his wife, an adaptive physical education teacher, a retired engineer, a retired bank executive, and a Special Olympics coach. The board is still expanding to include additional consultants for buildings such as the planned clinic. "We're getting specialized advice from experts in every area," Brewer said.

The first residence is a 10,000-square-foot colonial-style home that will accommodate eight adults, each with private bedrooms. "We plan to have one or two caregivers for the first residence," said Brewer. "The caregivers will have the education and experience to assist each resident with his or her individual habitation plan."

Brewer emphasizes that Elkwood Village will focus on establishing an outstanding quality of life for the mentally challenged based on spiritual, economic, and social growth. "Elkwood Village will enable its residents to have independent living through employment and a traditional home life," said Brewer.

As a private facility, financial support is required for maintaining residents, but Brewer knows that the quality of care is important to the families of these special individuals. Also, as a non-profit 501 (c) (3) organization, all financial support is targeted for the needs of those living in the community.

The first residence is expected to be complete in 2001. "It all depends on our funding," Brewer said. "We receive donations from individual, organizations and churches." He added that local companies also have been extremely supportive by providing discounts and donations of construction materials and supplies.

The master plan is for Elkwood Village to eventually include other residence buildings, and community infrastructures such as a vocational center, workshops, a library, clinic, and chapel. Recreational facilities such as a pool, park, tennis court, and baseball and softball fields will also be added.

"Building the entire community will take us 20 years or longer, but we've got a good start," Brewer said. "It's a beautiful, safe, and rural setting, but it's close enough to Huntsville and other small towns to allow residents to work."

While Brewer terms the scope of the plans "frightening," he also says "we're close to making it happen."

Far East District rebuilds tank range

By Gloria Stanley
Far East District

An important part of readiness is live-fire training. One of Far East District's projects to support readiness is upgrading the multipurpose range complex (MPRC) at the U.S. Army Korea Training Center in the northern part of South Korea.

The MPRC project is the result of damage suffered during the flooding of 1998. The flooding damaged three target movers extensively; the underground wiring system became inoperable with wiring exposed and torn, and submerged transformers. MPRC course roads were washed out and a contaminants collection pond filled with debris. The damage degraded operations for 30 days.

The district is upgrading the facilities and has just completed the first phase of the project. Phase I included eight firing positions, two kilometers (1.24 miles) of road and five reinforced concrete box culverts for flood control.

"The culverts were the biggest challenge, but they should control flooding here and will make it easier for tanks to cross the stream," said Maj. Pete Helmlinger, Project Engineer in the Tongduchon Resident Office.

To minimize the impact on training capability at the range, the $3.7 million dollar phase I work had to be done on a tight schedule. On Jan. 12, the live fire range was ready for use by companies of the 9th Infantry, the first units to begin Bradley Fighting Vehicle training at the range using the Phase I upgrades.

Phase II, also $3 million, is scheduled for completion in June and will include 15 battle positions and half a kilometer (about a third of a mile) of road. Both Phase I and Phase II work will improve the durability of the firing positions.

Also under construction at the MPRC, and scheduled for completion by October, are four open bay barracks, a maintenance facility, dining facility, and an after-action review facility. Each of the open bay barracks will house two companies. "Currently, units train for three weeks at a time and their quarters are tents," said J.C. Clark, Range Officer.

This is one of the new battle positions built at multipurpose range complex at the U.S. Army Korea Training Center. (Photo courtesy of Far East District)

Units of the 2nd Infantry Division use the MPRC for helicopter, Bradley Fighting Vehicle, Abrams tank, artillery, mortar, and close air support training.

Focus on Northwestern Division

Kansas City, Omaha, Portland, Seattle, Walla Walla

Historic region challenges division

By Clare Perry
Northwestern Division

Northwestern Division (NWD), born of the realignment of the former North Pacific and Missouri River divisions in 1997, recently christened itself the "Lewis and Clark Division" in tribute to the explorers who crossed it nearly 200 years ago. Early Corps engineers built roads, forts, and water passages. Today a workforce some 5,000 strong execute military and civil works projects totaling more than $1.25 billion.

Nearly 2,000 miles wide, with 14 states and 47 congressional districts, NWD stretches from Seattle to St. Louis and from the Canadian border to the Mason Dixon line. Two of the country's largest rivers – the Missouri and Columbia – drain nearly one million square miles within its boundaries.

The territory explored by the Lewis and Clark expedition remains awesome in its geographical breadth and complexity, from the 3,000 miles of tidal shorelines along Oregon and Washington to the massive mountain chains of the Rockies and the Cascades. Like their namesakes, today's engineers of the Lewis and Clark Division stoically meet the challenges posed by such climatic differences and a correspondingly diverse workload.

The division commander, Brig. Gen. Carl Strock, directs all Corps water resource activities in more than one-quarter of the nation. From headquarters in Portland, Ore., and a Missouri River regional office in Omaha, Neb., the division directs and guides five district offices in Kansas City, Mo.; Omaha, Neb.; Portland, Ore.; Seattle; and Walla Walla, Wash.

A 190-person division staff, spread between both regions, oversees the management, coordination, and analysis of region-wide programs, and ensures that district processes, procedures, and activities result in top-quality products and services to customers. They also provide regional interface for upward coordination of technical policy and budgetary issues crossing district boundaries, and interact with other federal and state agencies, congressional leaders, interest groups, and international commissions.

Military

Consistent, top-flight support to 18 Army and 21 Air Force installations has helped NWD capture some of the industry's most coveted kudos. Three of its districts execute military programs – Kansas City, Seattle, and Omaha. They executed project contract awards of more than $1.3 billion of military construction programs at a 100 percent level for the past three years. That performance resulted in Kansas City District winning the Air Force's Design Agent of 1999; Omaha District winning the Air Mobility Command's Design Agent of the Year, with an additional Air Force Merit Award for the Operation Support Facility at Schriever Air Force Base, Colo.; NDW winning the Air Mobility Command's (AMC) Construction Agent of 1998; and Seattle District winning AMC's Construction Agent of the Year last year, along with being named as Design Agency for the Army's Community and Family Support Center.

Of the division's $328.5 million military construction program in fiscal year 2000 (FY00), about $201 million is work for the Air Force and nearly $128 million for the Army. Major projects include C-17 bed-down facilities at McChord AFB, Wash., and Mt. Home Air Force Base, Idaho, new barracks at Fort Lewis, Wash., and Fort Leavenworth, Kan., and more than 1,800 private housing units at Fort Carson, Colo.

NWD's $350 million environmental mission includes the Defense Environmental Restoration Program, Environmental Compliance Assessments, and Superfund sites in Regions 2 and 10 of the Environmental Protection Agency, such as the massive cleanup in progress at Bunker Hill Mine in Idaho.

Civil Works

While all Corps divisions have similar missions for flood control, navigation, recreation, and disaster response, NWD's mission in the hydroelectric and salmon conservation areas frequently comes up on the nation's radar screen.

Twenty-one Corps projects in the Columbia River hydrosystem provide about 50 percent of the Northwest's electric power, while the Corps' eight Missouri River region hydroelectric dams meet about 10 percent of that basin's power needs. Altogether, NWD projects produce 56 percent of total Corps-supplied hydropower nationwide.

Probably the most high-profile activity in the division, drawing national attention and Congressional interest, is a five-year, $23 million study on options to help improve passage past the four Lower Snake River dams.

The draft environmental impact statement is currently out for public comment and discussion at more than a dozen public meetings in Washington, Oregon, Idaho, and Alaska. NWD personnel also participate in a federal agency forum, the Federal Caucus, to promote salmon conservation via a comprehensive ecosystem approach which examines the impacts of habitat, harvest, and hatcheries on 14 species of fish listed as endangered or threatened.

While the Missouri River basin's storage capacity at Corps projects is twice its yearly runoff, Columbia Basin projects control only about 25 percent of runoff volume in the Pacific Northwest. Yet, the division's 80-odd flood control projects have prevented nearly $82 billion in flood damages since construction. System-wide flood control involves an interconnection with many non-Corps projects, both public and private, coordination with the three federal power-marketing agencies and Canadian water resource agencies.

As member of the U.S. Entity to the Columbia River Treaty with Canada, NWD's commander is party to agreements governing release requests from upriver Canadian reservoirs. Those treaty obligations, and a commitment to managing river operations and increasing fish survival through an adaptive management approach, require the division's Reservoir Control staff to closely coordinate with other state and federal agencies, tribes, utilities, fisheries, navigators, irrigators, and environmental groups.

River and fish conditions are closely monitored and adjustments made to operations during fish migration season through flow augmentation, additional spill, juvenile fish transport, and lowered reservoir levels. To supplement these operational changes, structural changes were made at many Columbia Basin projects — special screens to guide juvenile fish away from turbines, smolt monitoring facilities, and spillway deflectors to reduce gas supersaturation.

An FY00 appropriation of $560 million for civil works covers monies for fish mitigation, 36 General Investigation studies, 21 construction projects, and operations and maintenance at more than 115 projects in NWD's five districts.

From military programs like the Space Command Headquarters in Colorado Springs, Colo., to civil works like the Lake Washington Ship Canal in Seattle, Northwestern Division does it all. (Left photo courtesy of Omaha District, right photo courtesy of Seattle District)

District serves Northwest for 50 years

By Dutch Meier
Walla Walla District

Walla Walla District recently celebrated its 50th anniversary of service to the Pacific Northwest and the nation. Founded in 1948 to build a large hydropower dam on the lower Columbia River, the district is responsible for civil works activities throughout the Snake River basin. The district's 600 members accomplish their missions in southeastern Washington, northeastern Oregon, throughout all but the northernmost parts of Idaho, small sections of northern Nevada and Utah, and in the headwaters of the Snake River around Jackson Hole, Wyo.

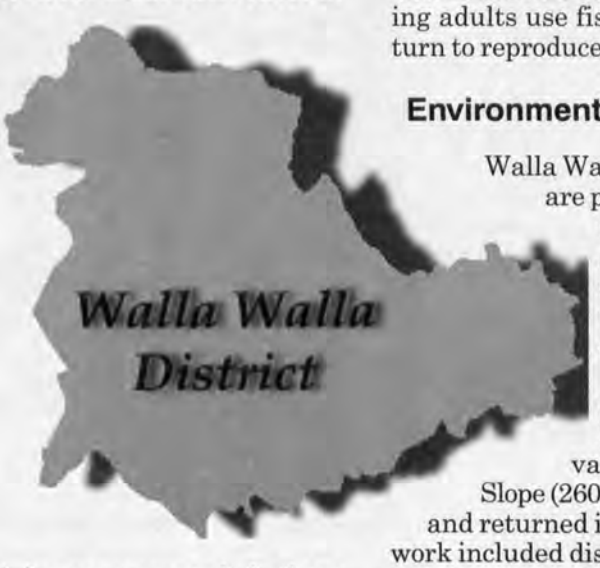
A juvenile fish barge, carrying salmon collected at Lower Granite Dam, leaves the lock at Little Goose Dam and head toward the dock at Little Goose fish facility. (Photo courtesy of Walla Walla District)

Dams

Civil works activities include being the Corps' second largest hydropower producer, providing commercial and recreation navigation on part of a 400-mile inland waterway aiding flood control and emergency management, maintaining natural resources and recreation facilities, and conducting clean water and wetlands regulation and enforcement throughout Idaho. This 115,000 square mile area includes agriculture, timber, and high desert environments.

Key Walla Walla District operations activities include a system of navigation locks at five dams. One is McNary on the Columbia River near Umatilla, Ore. The other four are on the Snake River in Washington — Ice Harbor near the Tri-Cities of Pasco, Richland and Kennewick; Lower Monumental near Kahlotus; Little Goose near Starbuck; and Lower Granite near Pomeroy. This system allows producers to move mainly wheat and wood products to the ocean and to markets throughout the Pacific Rim, and to bring petroleum products to inland customers.

Walla Walla District operates three other facilities. These include Dworshak Dam, which provides power production, flood control and storage water, and extensive recreation on the Clearwater River in Idaho; Lucky Peak Dam, which provides flood control, irrigation storage, and recreation near Boise, Idaho; and Mill Creek Dam which provides flood control and recreation in Bennington Lake near Walla Walla, Wash.



Fish

Salmon and steelhead trout have long been symbols of the Northwest. Declining numbers of salmon in the region have focused district efforts on examining processes to help them increase.

Walla Walla District recently released a major draft environmental impact statement for a fish passage options study. The Lower Snake River Juvenile Salmon Migration Feasibility Study is considering all aspects of four separate pathways for salmon recovery. The choices are continued operation of the existing system with some modifications, operation of the existing system with major facility changes; natural river drawdown (the earth-filled portions of the four dams on the Snake River would be removed), restoring the river to its original levels, and maximum transportation of juvenile salmon and steelhead. A preferred alternative won't be identified until the final environmental impact statement is delivered.

One of the district's unique activities is to protect endangered Pacific chinook salmon. The Juvenile Salmon Transportation Program, often called "fish barging," has been ongoing for 30 years. Smolts are collected at dams before they face the hazards of hydropower generating turbine units. They are placed on specially-designed barges and carried past as many as eight dams on the Snake and Columbia Rivers. They are then released to make the last dash to the ocean where they will grow and return inland to spawn. In 1995, 18.5 million juvenile salmon and steelhead were barged safely around dams. Returning adults use fish ladders to get past dams to return to reproduce.

Environment clean-up

Walla Walla soldiers and civilian employees are partnered with Seattle District and the Environmental Protection Agency to clean up the aftermath of a century of contaminated operations at the Bunker Hill lead mine site near Kellogg, Idaho.

The district also partnered with the Department of Energy at its Hanford Nuclear Site to clean up a valuable area called the Wahluke Slope (260 square miles of the site's landmass) and returned it to the agency for other uses. The work included disposal of non-radiological contaminated or hazardous materials, capping wells, and restoring fish and wildlife habitat areas. The job was finished on time and under budget.

New business practices

The district is preparing to meet future challenges with new business practices, according to Lt. Col. William Bulen Jr., District Commander. Strategic planning, public policy processes, and fiscal resource strategies will greatly impact the way the district achieves its missions.

"Our era of dam building has passed and we don't see many big construction projects in our future," Bulen said. "We've been heavily involved in endangered species recovery efforts for a long time. Making our facilities more fish-friendly for listed stocks of threatened or endangered salmon has been important work that we've done well. Today, however, we're looking hard at what our workload will include after fish."

Some of that workload will involve work for others. Dennis Cannon, Planning Division Chief, led the Hanford Program Office during the site's cleanup. His duties have grown and now include helping potential customers find "One Door to the Corps" — identifying the capabilities of the district and other Corps elements in engineering and environmental services. Customers include Native American tribes, other federal agencies, state and local governments, and military installations in the region. Cannon's staff recently set up a forward office in Boise to lead the new customer outreach efforts across much of Idaho.

Disaster response

Walla Walla is also an important partner in protecting lives and property, and providing expert service during natural disaster recovery operations. Damaging floods have occurred throughout the region during the past several years. During major recovery operations one recent spring, district officials met in Boise with Vice President Al Gore, Federal Emergency Management Agency Director James Lee Witt, Corps Civil Works Director Maj. Gen. Russell Fuhrman, and Idaho officials. The district ensured every possible Corps resource and effort was brought to bear in flood-fighting and recovery operations in the region.

Recreation

The district also provides extensive access to recreation facilities. Natural resources management staffers operate numerous wildlife habitat and recreation areas, including two of the more popular in Idaho and many in Washington and Oregon. The Corps is one of the top water-related recreation providers in the country and Walla Walla serves as home to the Corps' nation-wide water safety program manager. District park rangers and interpretive guides conduct many programs to educate people on safe play in, on, and near water.

To learn more, visit the Walla Walla District website: www.nww.usace.army.mil

Focus on Northwestern Division

Diverse missions challenge Seattle

By Jim Kluge
Seattle District

Seattle District opened in 1896 to provide civil and military projects to the Northwest. Between 1904 and 1911, the district built a wagon road into Mount Rainier National Park, opening the area to travelers. Military construction in the early 1900s included Fort Casey on Whidbey Island and Fort Worden at Port Townsend, Wash. In World War I, these forts were expanded for coastal artillery crews.

In World War II, the district built defense installations in the Northwest and Alaska. They also helped build the Alaska Highway, the Manhattan Project at Hanford, Wash., and intercontinental ballistic missile sites in Montana and Washington. The district's military mission has evolved into design and construction projects for both Army and Air Force installations in the Northwest.

In civil works, Seattle District's Lake Washington Ship Canal and Hiram M. Chittenden Locks project has provided transportation for thousands of vessels since 1917. It remains one of Seattle's most popular tourist attractions. The fish ladder there was an early commitment by the district to the environment.

Today the district has a number of Superfund environmental restoration projects and a strong program for safe, beneficial use and disposal of dredged materials. The district's Regulatory Branch processes some 1,200 permit applications per year, 30 percent involving wetlands.

Chief Joseph Dam on the Columbia River is the Corps' largest hydroelectric dam, generating enough power to serve two-thirds of metropolitan Seattle. Libby Dam in Montana was also built to produce hydropower and prevent flooding, as was Albeni Falls Dam in Idaho. All three provide major recreation areas. Howard Hanson Dam and Mud Mountain Dam in the Cascade Mountains have a long history of preventing major flooding in some of the Puget Sound's major cities.

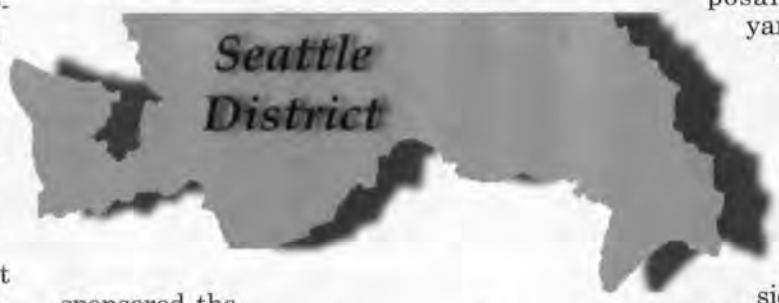
The district's disaster recovery support and flood fighting operations have sent district people to Alaska to help in earthquake recovery and oil spill cleanup, to San Francisco to assist after the Loma Prieta earthquake, and to Washington, Idaho, and Montana to fight floods.

From its early years, the district has improved Northwest harbors and navigation channels, from major shipping channel dredging projects to removing snags, logs, and other debris from Puget Sound, Lake Washington, and navigable portions of major rivers.

The fish ladder observation windows are a popular tourist attraction at Hiram M. Chittenden Locks. (Photo courtesy of Seattle District)

Environmental projects. Recent environmental restoration in the district have included several Section 1135 projects. In western Washington, the district removed earthen levees to restore fish and wildlife habitat to Deepwater Slough and the Skagit River. Combat engineers from Fort Lewis used explosives to demolish the levees. Once the dikes were gone, tidal influence was restored to more than 200 acres of a 430-acre island in a state wildlife refuge.

In the Thornton Creek watershed, a small stream was diverted to form a surface channel, wetland, and fish raising pond. Seattle Parks and Recreation sponsored the project, with support by many volunteers to replant the area.



Beach erosion. The Lummi Indian nation sponsored the district's Lummi Shore Road project, which included building 9,400 linear feet of rock revetment to prevent further erosion along the road, followed by beach nourishment.

Ship canal. Last November, the district started a project at the Hiram M. Chittenden Locks to improve fish passage and survival. The smolt passage restoration project will reduce damage to young salmon leaving the Lake Washington system and give them an easier, safer route to Puget Sound. Estimated cost is about $2.3 million. Along with spillway gate flumes to provide easy exit for smolt, the project includes strobe lights and slower lock fills to keep smolts from entering harmful filling culverts.

Navigation projects. The district has begun two channel deepening projects in the Puget Sound area to accommodate new giant containerships. This past year, construction started on the Blair Waterway Channel Deepening project, sponsored by the Port of Tacoma, to deepen the federal navigation channel and port berths to 51 feet. The project will remove about 1.14 million cubic yards of material.

Another channel and berth deepening project is under construction at the East Waterway on Elliot Bay. Sponsored by the Port of Seattle, the project will remove about 137,000 cubic yards of material suitable for open water disposal, and 84,000 cubic yards to be placed at an upland site. Stage I was completed last month.

Other recent navigation projects are the South Jetty at Grays Harbor to address shoreline erosion problems, and the completed Phase I of the Point Chehalis revetment, which included beach nourishment and off-site mitigation through salt marsh restoration.

Emergency response. Seattle District's Emergency Advance Measures Projects helped three communities this spring when flooding threatened. Projects in Lightning Creek, St. Maries, and Milo Creek in Idaho included removing debris to prevent log jams at highway and railroad bridges, reinforcing a crib wall with steel pilings, and running a 54-inch culvert down a street in Kellogg, Idaho.

Flooding in western Washington began the day before Thanksgiving and the district's emergency response flood teams worked during the holiday. In another incident, rising waters in Pe Ell, Wash., threatened the sewage treatment plant.

Flooding occurred again in December when the district provided floodfight assistance in Cle Elum along the Yakima River in eastern Washington, and in western Washington along the Humptulips where a levee breached. Flood team members also provided technical assistance and sandbags at four sites in western Washington.

More water. The district's Howard Hanson Dam Additional Water Storage Project will increase water storage, and also increase fish and wildlife production. The cost estimate for all modifications is $77.8 million. Modifications to the project include increased summer conservation storage, building a new fish passage intake tower, repairing seepage through the right abutment, and building habitat sites throughout the reservoir area and downstream. Construction is expected to begin next fiscal year.

Haz-tox. Seattle District is the Hazardous, Toxic, and Radioactive Waste Design Center for Washington, Oregon, Idaho, and Montana. Eagle Harbor, near Bainbridge Island, Wash., is the site of the Wyckoff-Eagle Harbor Superfund site. The district helped design and build the capping and remediation project, the first in the Pacific Northwest to use clean dredged material at a Superfund site to confine contaminated sediments.

At Camp Bonneville, north of Camas, Wash., the district is conducting environmental investigation and remediation for transfer to the county under the Base Realignment and Closure program. An important part of the effort is finding and removing unexploded ordnance.

Military readiness. Seattle District continues to support the C-17 beddown at McChord Air Force Base (AFB). A total of $130 million in construction projects are expected, including a flight simulator, new and enlarged hangars, a facility to process departing troops, and utility work.

Seattle District designed the new $1.7 million F-15 and B-1B Squadron Operations Facilities at Mountain Home AFB. The district is also managing design, construction, and real estate for a training range just south of Mountain Home. The Enhanced Training in Idaho project, expected to be completed in four years, addresses the 366th Wing's need for an exceptionally high level of training that reflects actual combat conditions.

The district also designed a recently-completed $4 million project to enlarge the flightline fire station at Fairchild AFB, Wash. Other projects include

Continued on next page

Focus on Northwestern Division

Civil missions keep Portland busy

By Diana Brimhall
Portland District

Portland District was established in 1871 to improve navigation on the Columbia and Willamette rivers. Today, 129 years later, the Corps' regional contribution has grown from providing and maintaining safe navigation routes to providing service in 14 traditional civil works missions, such as ecosystem restoration, flood damage reduction, navigation, emergency preparedness and response, irrigation, hydroelectric power, water quality, recreation, and regulatory. There is an ever-increasing focus on environmental management and restoration, fish protection and enhancement, and hydropower.

The district covers nearly 97,000 square miles in Oregon and southwest Washington. It operates three multipurpose projects with navigation locks on the 465-mile-long Columbia-Snake Inland Waterway, 13 multipurpose projects in the Willamette Valley, and two in the Rogue River Basin. Twelve district projects include hydroelectric powerhouses. These 12 projects generated enough energy to supply about two million homes with electricity last year.

District-operated projects (a $1.2 billion investment) have already prevented $20 billion in flood damages. Each year, about 11 million people enjoyed Corps-created recreational and educational opportunities in the district. The district maintains more than 720 miles of federal navigation channel and 33 channel and harbor projects.

Portland District also operates the 126-year-old Willamette Falls Locks, and the Sediment Retention Structure built after the 1980 eruption of Mount St. Helens to protect downstream communities from additional flooding. Because of their experience gained from Mt. St. Helens, district teams also provided expert rehabilitation support to the Philippines after the 1993 eruption of Mt. Pinatubo.

Portland District is home for half the Corps' dredge fleet. The *Essayons* and *Yaquina* maintain the Columbia River navigation channel, work along the coasts of Washington, Oregon, California, Alaska, and Hawaii, and respond to emergencies elsewhere.

The final step in a five-year-long study was completed in December with the signing of the Chief of Engineers' Report on the Columbia River Channel Improvement Study. The report recommends deepening the 103.5 mile federal navigation channel by three feet. The estimated cost including environmental restoration of 250 acres in the estuary and $5.6 million of wetland and riparian habitat restoration, is about $196 million. This project is authorized and, if Congress appropriates funds, construction could begin in fiscal year 2002.

This 61-year-old turbine at Bonneville Dam will be replaced with a new turbine which will imrove both salmon survival and electric power generation. (Photo courtesy of Portland District)

Seattle

Continued from previous page

hospital improvements, a flightline support facility and squadron operations buildings.

Military quality of life. The district is also involved in a number of quality of life military projects. These include renovating the Elkhorn Diner Airman Dining Hall at Malmstrom AFB, a new library-education center at Fairchild AFB, and a new $3.4 million Consolidated Medical Training Facility at McChord AFB is under construction.

The district is also involved in numerous recreation projects, including bowling centers at Forts Belvoir, Va.; outdoor recreation centers at Forts Eustis, Va., and Wainwright, Alaska; and an auto skills center at Fort Riley, Kan.

Small projects. Small projects are generally routine operations, maintenance, and construction projects costing less than $250,000. A team of 13 district employees offer a flexible vehicle for Corps customers to accomplish minor construction with reduced design fees and quicker turnaround times. The team is located in four separate offices, mostly at Construction Resident Offices.

Environmental. Portland District is placing greater emphasis on restoring, preserving, and protecting the environment. The district is using the Section 1135 program, which allows modifications to existing Corps projects to restore the environment, and building new projects to restore areas degraded by Corps projects, such as enhancing fisheries, restoring wetlands, or improving wildlife habitat. These projects have ranged from re-establishing fish access between Trestle Bay and the Columbia River, to enhancing waterfowl habitat at Fern Ridge Lake, Ore.

The district also is proposing a 2001 reconnaissance study to comprehensively address the issues associated with watershed and estuary health in the lower Columbia River.

Fisheries. The biggest environmental challenge may be helping fish pass through hydropower dams. While the Corps knows its hydropower dams affect fisheries, the first signs that migratory fish could be in trouble were visible more than 100 years ago. Today, what some call the All Hs (habitat, harvest, hydropower, and hatcheries) have brought runs of salmon and other species of fish to near extinction. During the 1990s several species were listed as threatened or endangered.

About $85 million in construction to benefit fish, is planned or in operation at Columbia River dams.

The Juvenile Fish Sampling and Monitoring Facility at John Day Dam includes a transport flume that guides fish from the upriver side of the dam through a dewatering facility and monitoring building, and then back into the river below the dam. The facility's detectors will help scientists learn more about fish and their survival percentages.

The Bonneville Dam juvenile bypass system improvements project includes improved juvenile fish passageways in the second powerhouse, a two-mile-long outfall flume, a smolt monitoring facility, and outfall structure.

Other system-wide work includes studying flow rates, spill, drawdown, surface bypass, gas abatement, and fish behavior. Tests of surface bypass and other modifications could lead to a decision on actions to pursue in 2001.

Corps fisheries work also includes temperature control structures in the Rogue River Basin, which allow release of water at temperatures more beneficial to fish. Similar controls will be built at Cougar Lake in the Willamette Valley.

Hydropower. The district has three major rehabilitation projects on the Columbia River. At Bonneville Lock and Dam, rehabilitation began in 1993 and should be complete in 2008. Work involves replacing circuit breakers, five generator windings, 10 transformers and 10 turbines, and rehabilitating the switchyard. The project will cost about $128.7 million. Redesigned turbines called minimum gap runners (MGR), are being installed and tested. The MGR could increase salmon survival by four percent, equaling millions of fish. When all the MGRs are installed, generation capability will increase enough to power 16,000 more homes.

A $94 million rehabilitation project at The Dalles Dam is slated to be completed by 2008. It includes eight generator rewinds, new generator excitation equipment, and replacing turbine blades on 14 main units.

Work at John Day Dam is nearing completion. The project, which began in 1985, includes repair of eight turbines, 13 generator rewinds, main circuit breaker control modifications, and installing a Data Acquisition and Control System.

The district is home for the Hydroelectric Design Center. HDC has expertise in turbines, generators, governors, circuit breakers, transformers, exciters, control and data acquisition systems, cranes, intake structures, and fish screens. HDC also assists other agencies, organizations, and private firms doing business overseas.

Information management. The Western Processing Center (WPC), E-mail Center of Expertise, and the Network and Systems Operations Center, all in Portland, support Corps-wide missions. The WPC is one of two computer centers serving the Corps. The WPC provides full automation services, such as processing platforms and file storage, systems administration and operation, data base administration, and Internet. More than 100,000 messages a day go through the E-mail Center. The Network and Systems Operations Center maintains the network. All centers operate round the clock.

Focus on Northwestern Division

District provides full range of service

By Kevin Quinn
Omaha District

Omaha District has been a model of leadership, innovation, and commitment to excellence since its beginnings in 1934. Within its geographic area, it has federal, civil, and military engineering and construction responsibilities in all or part of 11 states covering 700,000 square miles. The district serves the engineering needs of the Army and Air Force in eight states, and its military construction boundaries span from the Rocky Mountains to Lake Michigan.

Its environmental restoration mission is broad and diverse, with customers and projects nationwide. The Upper Missouri River watershed, stretching from Montana to the southeast tip of Nebraska, defines the district's civil works boundaries.

The district is also known for its special capabilities. It has the Corps' Rapid Response office and the Hazardous/Toxic/Radiological Waste (HTRW) Mandatory Center of Expertise (CX). It is also the center of expertise for Protective Design, Transportation, Fueling Systems, and Interior Design. The CXs provide support around the world including East and Southwest Asia, Europe, South America, and the Middle East.

The district's total budget for fiscal year 2000 (FY00) is just under $400 million. The Civil Works portion is about $97 million, the HTRW $137 million, and Military Construction $152 million.

Despite staff cutbacks from about 1,700 full-time employees to 1,265 during the 1990s, Omaha District hasn't lost a step in executing its diverse mission. Outstanding employees with an unparalleled work ethic and critical focus on excellence allowed the district to execute more than 100 percent in all three programs in FY99.

Military construction

The district is proud of its rich tradition of quality design and construction for national defense, dating back to World War II and including command posts for the North American Air Defense Command, the former Strategic Air Command, and the silos for intercontinental ballistic missiles.

The district also designed facilities for the Air Launched Cruise Missile, and the B-1 and B-2 bombers. Today's military construction focus is on revitalizing facilities on active military installations, adding replacement facilities for units displaced by base closure, and disposing of military installations designated for closure. Key customers include the Army, Air Force, Army Reserve, Air Force Reserve, Air Force Academy, and Defense Finance and Accounting Service.

The district is involved in several efforts in support of the Army Base Realignment and Closure (BRAC) process. Installations receiving projects include Fort Carson, Colo., and Fort McCoy, Wis. Although the Air Force has its own agency for base closure and disposal, the district has done many Air Force BRAC construction projects.

The Cadet Education and Training Facility at the Air Force Academy in Colorado Springs, Colo., won the 1998 Award of Excellence in the Chief of Engineers Design and Environmental Awards. (Photo courtesy of Omaha District)

The privatization of family housing project at Fort Carson was a key military project awarded in the first quarter of FY00. Fort Carson was the first installation to begin privatization efforts following passage of the 1996 legislation. The project involves building 840 new family housing units and renovating 1,824 existing ones. The cost of construction and renovation will be $160 million during the next five years.

Another key project is the $25 million Upgrade to Fairchild Hall (Phase 1 and 2) for the U.S. Air Force Academy in Colorado Springs. This project involves renovating classroom space in the academy's main academic facility. It is the first major upgrade since the facilities were built in the 1960s.

Other significant projects:

- Railyard upgrade and two warehouse projects at Fort Carson ($37 million).
- Minuteman Dismantlement near Grand Forks Air Force Base, N.D.
- A $15-million reserve training facility at Fort McCoy.

Environmental

Since 1982, Omaha District has provided full service environmental support to several federal agencies, including the Environmental Protection Agency, Department of Defense, and Departments of Interior and Energy. The DoD work includes hazardous, toxic and radioactive waste clean up at several active Army and Air Force installations and BRAC installations throughout the U.S. In all, the district's environmental restoration program ranges from $150-$200 million per fiscal year. The district played a key role in the cleanup at 31 Army and Air Force bases, and is working on more than 60 Formerly Used Defense Site projects, many of them attracting public interest. Hundreds more FUDS sites still require investigation.

The district's HTRW strength lies in its experienced management staff, program diversity, technical experience, and a record of high customer satisfaction for 18 years. The district also has a reputation for developing and implementing innovative, successful contracting tools, such as the Total Environmental Remediation Contracts (TERC) concept and the Corps' unique Rapid Response Clean-up program.

Omaha District is entering its second decade as Air Combat Command's primary HTRW design district and central point of contact for the Corps. Due its business partnership with Omaha, ACC may become the first Air Force command to complete its environmental cleanup program.

Civil works

Omaha District was originally founded to support flood control and to make the Missouri River safe for commercial navigation from Rulo, Neb., to Sioux City, Iowa. The watershed of the Upper Missouri River dictates the district's civil works boundaries.

The key focus is on operating and mainaining 27 dams, including the six main stem dams and reservoirs on the upper Missouri River, which provide:

Flood control -- Main stem dams and levees have prevented more than $10 billion in flood damages in Omaha District. In 1997 alone, damages prevented totaled $12 billion. The reservoir system, which protected the Missouri basin during the 1993 Midwest floods is the largest in the U.S. with a storage capacity of 74 million acre-feet.

Hydropower -- The 36 generating units at the main stem dams annually generate 10 billion kilowatt hours.

Recreation -- Last year, more than 80.4 million visitor hours were recorded on district projects and 234 recreation areas.

The district's Construction General program has ongoing flood control projects at Perry Creek in Iowa, Wood River in Nebraska, and Big Sioux River in South Dakota.

Omaha District also has:

- A land acquisition project at Buford-Trenton, N.D.
- A land acquisition/floodproofing project at Pierre-Fort in Pierre, S.D., to alleviate the effects of high groundwater levels.
- A combination land acquisition/construction project for fish and wildlife mitigation on the Missouri River navigation project.
- Begun work on recreation/environmental related construction on the Missouri National Recreational River.
- Begun a major rehabilitation of the Garrison, N.D., powerhouse.
- Assisted the transfer of South Dakota project lands back to the state and to Indian tribes.

Work with the tribes

Because Omaha District works with 27 different Indian tribes whose reservations adjoin project lands, efforts to resolve issues fairly for all parties are a top priority. Among its success stories is a cooperative agreement with the Oglala Sioux Tribe, a partner in restoring the former Badlands Bombing Range in South Dakota. The first of its kind between the federal government and a Native American government, it allows DoD to meet its responsibilities at the former range and provide the tribe the training and tools to accomplish much of the restoration.

Kansas City has served for 90 years

By Larry Crump
Kansas City District

Kansas City District's strength lies in the diversity and atitude of the people who make up its core. From its founding more than 90 years ago to today, it has been involved in a wide range of projects and changing missions, from its earliest and continuing work on navigation and flood control to an expanded role that includes military design and construction, and the cleanup of hazardous, toxic, and radiological waste.

Military missions

Within the district's military boundaries lie five major military installations, two Air Force and three Army. Each installation has its own unique role in supporting the nation's defense, and each has had its own unique support requirements. Members of Kansas City District have been instrumental in helping those installations carry out their missions by designing and building facilities, in addition to providing installation support assistance to Army facilities.

In addition, the district provides support to the U.S. Army Reserve Design Program for a 10-state region of the nation's heartland.

The district was a major player in Base Realignment and Closure (BRAC) 95 and the effort to build facilities for the Army's Military Police and Chemical schools, which both relocated from Fort McClellan, Ala., to Fort Leonard Wood, Mo. This $224 million program was the Army's largest BRAC action at that time, and the district's largest military construction project for fiscal years 1997-98.

Preparing installations for new missions is not a new task for the district. It earlier designed and built the facilities at Fort Leonard Wood when the Engineer School relocated from Fort Belvoir, Va. It designed and built facilities at Fort Riley, Kan., to accommodate the Abrams tank, the Bradley Fighting Vehicle, and the Blackhawk helicopter.

At Fort Leavenworth, Kan., Kansas City District performed major upgrades to include a $26 million-plus General Instruction Building and renovation of the "Bee Hive," a historic facility that was designed to retain its facade, yet designed internally to accommodate state-of-the art computer simulation training modules.

One of the district's most recent upgrades, and its largest single military design and construction project ever, is the $400 million B-2 Stealth Bomber program at Whiteman Air Force Base, Mo. Except for a handful of buildings, the entire Whiteman complex was built anew, including building self-contained hangar facilities designed to accommodate the Stealth. To date, 20 of these high-tech aircraft are based at Whiteman.

The district performed a similar function at McConnell Air Force Base, near Wichita, Kan., in preparing for arrival of the B-1B bomber.

More recently at McConnell, the district rebuilt its housing area, hospital, and the Morale, Welfare and Recreation (MWR) facility following a tornado that devastated the area. The innovative MWR design combined all of the MWR services for all ranks under one roof.

Brush Creek, even during construction, saved more in flood damages prevented than the project cost to build. (Photo courtesy of Kansas City District)

Environmental missions

In 1983 the district was assigned responsibility to support half the Environmental Protection Agency (EPA) regions in the continental U.S., including Alaska, Puerto Rico, and the Virgin Islands for Superfund work. (Recent decentralization reduced the district's area of responsibility to supporting new work in EPA Regions II, IV, and VII.) Two years later, the district received the Defense Environmental Restoration Program assignment within the same boundaries.

It has provided environmental remediation services to active and former defense facilities. Its major Installation Restoration Program work includes projects at Fort Leavenworth and Fort Riley, Kan., and Army ammunition plants (Lake City Army Ammunition Plant, Mo., Sunflower Army Ammunition Plant, Kan., and Kansas Army Ammunition Plant) as well as at Whiteman Air Force Base.

Formerly Used Defense Sites (FUDS) are among the district's biggest current challenges. These are areas once used by Department of Defense agencies, such as the former Naval Ordnance Plant at Hastings, Neb., the former Nebraska Ordnance Plant at Mead, Neb., and Weldon Spring Ordnance Works near St. Louis, Mo. The district handles active installations in Kansas and Missouri, and several smaller FUDS are also located in these two states.

Among the services available to other agencies which work with Kansas City District are a Site Characterization and Penetrometer System and a Low-Level and Naturally Occurring Radioactive Material disposal contract.

Civil missions

Civil Works projects were among Kansas City District's earliest missions. In 1907, the district widened and straightened much of the Missouri River for bank stabilization and to improve navigation. Since then, the district has built, maintains, and operates 18 multipurpose lakes in a four-state region. Two of the lakes provide hydropower that is marketed in several states.

As an offshoot of its efforts in flood control, the district has developed an Emergency Management Office. Its staff, augmented by members from throughout the district, has provided emergency management services to many agencies and people throughout the nation, including the Great Flood of 1993, the Loma Prieta earthquake in California, and Hurricane Hugo.

Today 18 lake projects make up the district's major civil works mission, with their attendant fish and wildlife management, water quality, flood control and navigation support. In recreation, these lake projects serve more than 12 million visitors each year.

But the district is also involved in other civil works activities. These include regulatory oversight in Kansas and Missouri, and bank stabilization and other flood control projects in its five-state area which includes major parts of Kansas and Missouri, and smaller areas of Iowa, Nebraska, and Colorado.

Most visible among these is a recently completed flood control project along Brush Creek in Kansas City. This beautiful aesthetic project, while under construction, saved more in flood damages prevented than the entire project's total cost to build.

Focus on Northwestern Division

Kansas City, Omaha, Portland, Seattle, Walla Walla

Life-changing

Graduates say power plant training gave fresh start

Article by Heidi Helwig
Photo by Bob Heims
Portland District

These five people were the first graduates of Portland District's Power Plant Training Program. In back stand Wayne Mattox and Sue Daly. Front row (left to right) are Lou Caracciolo, Scott Goodman, and Dennis Christensen.

It's hard to believe that technical training can change lives, but those who have graduated from Portland District's new Power Plant Training Program say it's true.

Four years ago, Sue Daly was a Safety Reports Assistant for the Safety and Occupational Health Office at Corps Headquarters. Today, she is a power plant operator at John Day Dam and she says she is in her element.

On Feb. 1, Daly and four others were recognized as the first to be promoted through Portland District's four-year Power Plant Training (PPT) Program, which combines mentoring with rigorous on-the-job training and college courses.

The PPT program's concept is not new, but its elements are. Rick Goodell, Assistant Chief of Operations Division, helped reinstate it in 1995 after a 14-year hiatus. With a new beginning came new ideas like centralized on-the-job training and mentoring. As District Chair of the PPT Committee, Goodell provides general oversight. But since the first five graduates were trained at The Dalles, Goodell needed eyes and ears there. They belonged to Ron Ontaveros, the chair of the Project PPT Committee.

"The program has provided an excellent opportunity for lower grade employees to upgrade and fill future critical crafts vacancies," Ontaveros said.

Each participant interviewed said the training challenged them.

Opportunity. One participant was Lou Caracciolo. Caracciolo, who has a geology degree, accepted a utilityman position at John Day Dam when he lost his geologist position in a RIF. He made the best of it, working up to an iron worker-rigger position through correspondence courses and on-the-job training. But, because there was no training program in place, Caracciolo had topped out.

"The power plant training program finally gave me an opportunity to start a new career," Caracciolo said. "The program has been rewarding. At first, I was embarrassed about having to go to school again, especially since I already have a college degree. But, now that it's over, I'm proud of what I've accomplished. I think we all have found out that the sacrifice is worth it."

Another graduate, Dennis Christensen, now works as a journeyman electrician.

"This was an outstanding opportunity for me," said Christensen, who began his career as a survey aid technician in the district's now-defunct Topographic Surveys Branch. "When I began to raise a family, I didn't want to be on TDY anymore," which led him to accept a job as an equipment operator at Foster Dam. When a utilityman job at The Dalles opened up, "I saw it as an opportunity to make a little more money. I was also told there would be a training program for the power plant."

Wayne Mattox, now a journeyman power plant operator, was juggling seasonal work with a fruit growing company and electronics classes at a community college when he met Jim Williams, The Dalles Dam's power project superintendent in 1991. From Williams, Mattox learned about a possible power plant training program at the dam.

Though the program did not materialize in 1991, Williams hired Mattox as a student worker and encouraged him to pursue his higher education goals, which led to him being accepted into the PPT program in 1995.

"These guys have really paid a lot and sacrificed a lot," Williams said of each of the participants. "These guys went to school full time and worked every hour they weren't in school. They have to be committed to the end product, which is a full-time job with the Corps of Engineers."

Sacrifices. Caracciolo agreed. "It takes dedicated and motivated people to complete the program as apprentices," Caracciolo said of anyone graduating from the PPT program. "We're talking about employees who are also mothers, fathers, husbands, and wives. For four years they must make the commitment by going to schools, studying, completing assignments, and being tested. This is all in addition to holding down a full-time job."

No one seems to know the impacts better than Christensen.

"The classroom time was demanding and I needed to study about 10 hours a week for most of the four years," Christensen said. "Eventually, the strain did take its toll when my wife left me. She didn't understand the commitment and investment I'd made and resented my focus." Adding to the strain, Christensen's father died last August.

"I nearly quit," Christensen said. "Through encouragement from coworkers, teachers, my mentor Bob Ames, and my foreman Frank Baker, I managed to rededicate myself and finish, thank God. This program gave me an opportunity to learn and grow. Now, I'm being paid for what I know and not for what physical labor I'm able to do. I have no doubt that it has made me a stronger person to have gone the distance."

Wayne Mattox, now a journeyman power plant operator, was foundering between seasonal work with a fruit company and electronics classes at a community college. He, too, found the program demanding.

"The challenges were numerous," he said, saying the biggest challenge was completing full-time courses at Blue Mountain Community College such as calculus, physics, and electronics, while working at The Dalles and John Day dams and taking care of his family.

"Other challenges revolved around being the first in a new program and the resistance of a few people at the dam," Mattox said. "Thankfully, those people were few and every operator at the project was supportive and helpful. I only hope I continue my career in a manner that will make Jim proud he put so much time and effort in me."

Challenges. Though Daly agreed the program was exciting, she also admitted it was not easy. One test was learning to maneuver through the power plant.

"My first challenges were physical, as I got used to the high ladders, and doing things I hadn't done since I was a kid," she said. "It's been challenging to learn the mechanics and operation of the equipment, not just the generators. There are governors, air compressors, and that river is coming at you whether you want it to or not."

Scott Goodman, now a journeyman electrician, was a traveling sporting goods wholesaler. He also said the most challenging aspect was "revisiting the learning skills." But he said it was equally rewarding. "Just knowing you're in a position to help the workforce and keep them safe is rewarding," he said.

"I'm so happy how this turned out," said Goodell. "This has proved exceptionally valuable for us. "To have a four-year program of this nature, to provide an individual like a utility person a career progression opportunity, that's rewarding."

Behind the scenes. The rewards go far beyond individual training, though. "The training benefits the district as a whole," Caracciolo said. "It assures that all the specialized knowledge, skills, and abilities the master journeymen have acquired throughout their careers gets passed on to the new apprentices, and don't leave through attrition. Thus, it makes for a much more efficient work force; the

Continued on next page

Chem demil plants computer designed

By Bob DiMichele
Engineering and Support Center, Huntsville

There is great novelty in watching television or movies in three dimensions. You put on those funny-looking 3-D glasses and watch the images magically take on a different perspective.

In complex engineering design, viewing in three dimensions is not a novelty but a common tool. Three dimensional computer-aided design (3-D CAD) changes work practices and creates new ones, according to Doug Grant, an engineer with Huntsville Center's Civil Structures Division. The Huntsville Center is using 3-D CAD in its design process for chemical demilitarization plants and other facilities.

"The key, fundamental change with 3-D CAD is the emphasis on up-front engineering rather an down-stream drafting," said Grant. "A lot of energy is put into building the 3-D computer model."

All the engineering data resides in a centralized relational database. Grant said a great deal of time and effort goes into creating a comprehensive database so that the model can provide a detailed visual representation of the design. Therefore, the computer models are an expense that formerly was not necessary. But the benefits are extensive for a complex project.

"The model is a window into the database," Grant said. With it, you don't get unconnected islands of automation. Instead, a 3-D design environment facilitates real-time integration between design disciplines.

Choose a pipe, beam, flange, or even a bolt. Click on it with a mouse and up comes a data box that describes its specifications. Designers can electronically superimpose another discipline's 3-D design so that the design is always updated with the latest changes.

The 3-D image lets you choose any perspective from which to view a structure or piece of equipment — top, bottom, or side. Or, look up at the foundation of a building from underneath. Move in or out of a structure. Even conduct a virtual plant tour. Electronically tag an item with a comment to discuss during a design review.

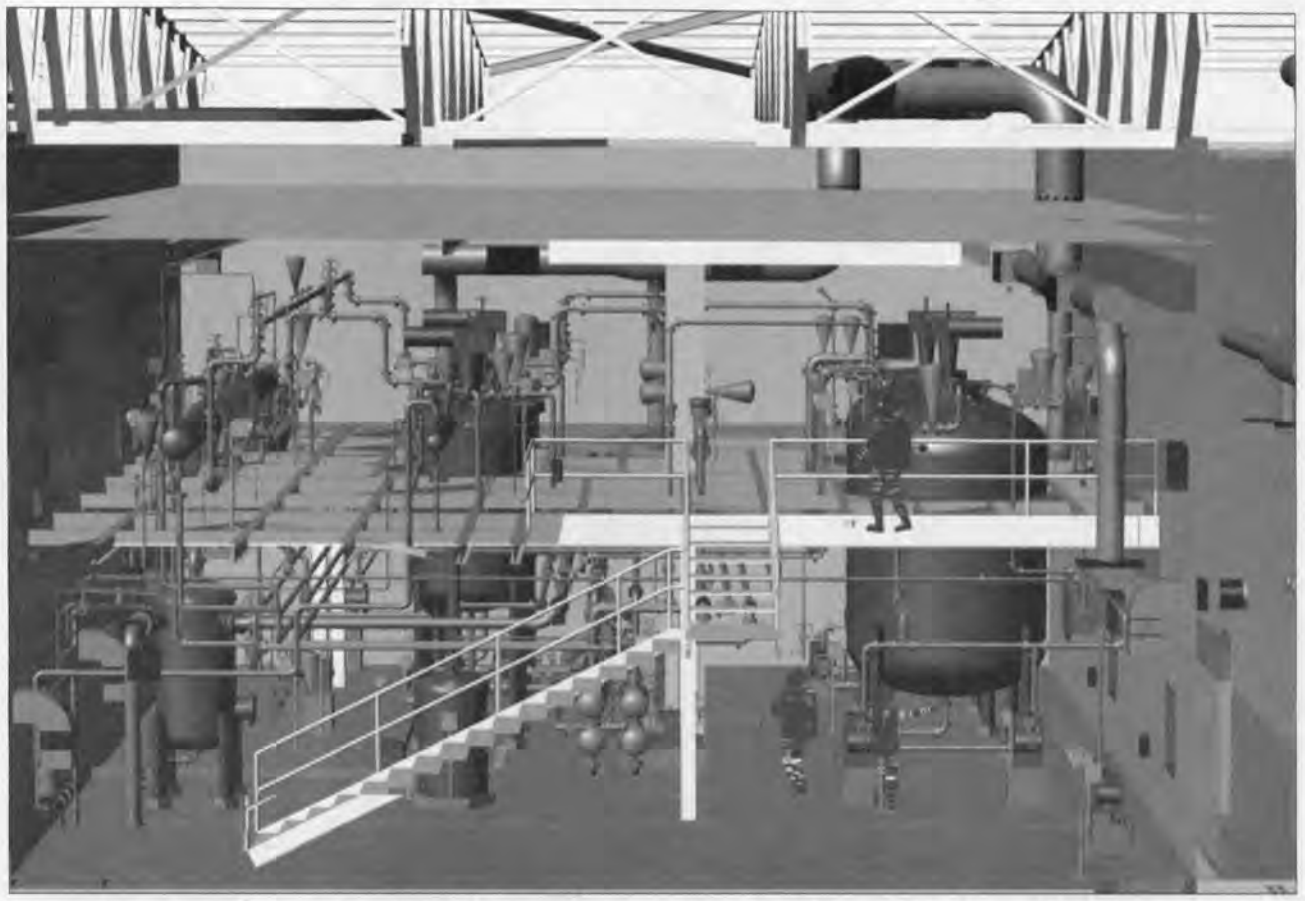
Grant said the tangible benefits and the impact on design processes comes from the generation of drawings, automated material takeoff, and the early detection of design interferences. "Drawings become by-products of the model," he explained.

Traditionally, progress is based on the percentage of drawings that are complete for a project. With 3D-CAD, progress is quantified based on the progress of the 3-D model. Drawings are then extracted from the model. If a design change occurs, the model is edited electronically and the drawings are automatically changed. The design change process is changed, Grant said, because the drawings are changed indirectly through changes to the model. The design is centered around the model rather than the drawings.

Sandy Wood, a mechanical engineer from Huntsville Center's Mechanical-Electrical Division agreed. He added, "traditional design efforts involve the preparation of two-dimensional drawings which are segregated by discipline. In this environment, it can be very difficult to identify all possible construction conflicts and interferences.

"With the 3-D model, all disciplines' designs are integrated and can be presented visually," Wood continued. "As a result, construction conflicts and interferences are virtually eliminated during the design process. According to published data, 3-D CAD can save two percent of construction costs on complex projects based on the elimination of change orders."

The 3-D CAD system also links design, construction, and operations and maintenance. For example, the 3-D CAD system provides "interference detection," Grant said. "If you run a piece of pipe through a maintenance or safety area in the computer model, a flag automatically pops up identifying the interference."



Three-dimensional computer-aided design gives an almost photographic view of facilities. (Graphic courtesy of Huntsville Center)

3-D CAD software can also be used to generate detailed reports on material descriptions and quantities for an entire design, Wood said. "These reports greatly increase the accuracy of cost estimates performed during the design phase. As an example, cost estimators could develop a report to determine exactly the amount of 3-inch Schedule 40 steel piping that will be required for construction."

In operations and maintenance, workers can take an interactive tour of the facility before it is built. "It gives instant recognition, Wood said. 'What if' experimentation for processes and procedures also is facilitated.

Both Wood and Grant cautioned that the expense of 3-D CAD is not cost-effective for every project because of the overhead cost of software, hardware, training and project setup. However, Huntsville Center did start its 3-D CAD effort with a small warehouse project at Blue Grass Army Depot, Kyn., to learn about the capability. It is a valuable tool for process design, but somewhat less valuable for small facility design because of the difficulty justifying training costs and the costs of maintaining the system, according to Grant.

"The more complex the facility or process, the greater the advantage 3-D provides," Grant said. Firms such as Bechtel, Stone & Webster, Parsons, and Raytheon have used 3-D CAD for several years.

Training

Continued from previous page

work gets done faster and safer. There's always someone on the crew that's 'been there and done that.'"

One of Ontaveros' jobs was to ensure the apprentices *did* acquire specialized knowledge and skills by overseeing and facilitating the training. He also provided administrative support for the program, reporting back to Goodell each trainee's progress. Ontaveros also helped select mentors for each trainee and resolved issues as they came. In the end, Ontaveros submits the request for journeyman certifications.

Two feathers. The broad and demanding training regimen that Ontaveros oversaw also likely convinced the Department of Labor (DoL) to recognize graduates with a certificate of accreditation.

"Our graduates don't just get one feather in their hat, but two," said Tim Seeman, the maintenance program manager who worked closely with DoL to secure a link between the two agencies. Williams said the training is more valuable now because, rather than depending on correspondence courses, the local college teaches the courses. "It's a lot more valuable in my opinion," he said.

Goodell added that the current training program also is the first developed in close working relationship between management, representatives of the crafts, and the United Power Trades Union.

Because of the training quality, the dual recognition, and the broad support, Seeman said that Portland District "doesn't worry about losing people who are trained to work in a power plant. We grow them in-house."

Rewards. Growing them in-house and in a centralized location is important, according to Seeman, because by the time the journeyman electricians, mechanics, and operators are working on their own, they're familiar with their projects and are working at full speed.

"These five are just the first ones," Goodell said, noting that the PPT program is also active in the Willamette Valley Project and Bonneville Dam, as well as The Dalles Dam.

"That's why we're making a big deal about it."

But an even a bigger endoresement than the successful graduation of these first five is the fact that the grads themselves fervently support the program. "The rewards are beyond all imagination," Mattox said.

Good idea becomes 23-year tradition

By Pam Doty
St. Louis District

Some ideas are so good that they get started and just don't stop. That's how it's been with EcoMeet, a 23-year tradition at Lake Shelbyville in Illinois.

EcoMeet is an interpretive outreach competition that the U.S. Army Corps of Engineers started back in the 1970s. The first EcoMeet was held in Pittsburgh District and it was such a success that it spread rapidly across the U.S.

Lake Shelbyville held its first EcoMeet in 1977. It's still going strong, and it has not changed substantially since it started. Schools throughout Central Illinois compete in the EcoMeet, which is held on the first Thursday in October. Schools compete in three age categories — Nature Sleuth (grades five and six), Junior Varsity (grades seven and eight), and Varsity (grades nine through 12).

Participating schools send a team with a coach, team captain, and three other team members. A few coaches have competed in all 23 Lake Shelbyville EcoMeets. Coaches and team members take this event seriously, and the school gets a coveted acorn plaque award to display in its trophy case beside sports trophies.

There are three different events for each age category. Events are primarily based on environmental topics such as conservation, preservation, and knowledge of several different types of wildlife. Topics such as water safety and orienteering have also been event topics.

Only three members of the team can compete in any given event, although the team captain must compete in all three events. One team member serves as an alternate for each event. Each team member competing in the event takes a test. Corps personnel and students from Lake Land Community College and Eastern Illinois University grade tests and monitor events.

After each event, the teams receive a raw score and an event placing. The raw score is calculated by adding team members' test scores together. The team with the highest raw score receives a first place for that event. The next highest raw score receives a second place and so on. This scoring system works well in keeping the competition close throughout the EcoMeet.

After all three events are completed, placings from each event are added up to determine the winners. If a tie occurs, team captains are asked tiebreaking questions. In the 23 years the EcoMeet has been held at Lake Shelbyville, tiebreakers have been used only twice. In an odd coincidence, a team that competed in the first tiebreaker about 15 years ago also competed in the second one this past October.

The top five teams in each age category receive a plaque in the shape of an acorn that varies in size depending on what place the team receives. The Mattoon Exchange Club of Mattoon, Ill., donates the plaques.

Students work hard during the EcoMeet, and competition is keen. (Photo courtesy of St. Louis District)

The Lake Shelbyville EcoMeet is held outdoors at Camp Camfield Environmental Study Area, so weather plays a major role in determining if it is held on the scheduled date. If the competition is cancelled due to bad weather, a rain date is set. Surprisingly, the Lake Shelbyville EcoMeet has only had to be rescheduled once.

By 1995, the Lake Shelbyville EcoMeet had become so popular that it outgrew the project's means. There were more than 25 teams competing in each age category! So the Corps partnered with Douglas-Hart Nature Center in nearby Mattoon to conduct the Nature Sleuth competition. The Junior Varsity and Varsity competitions are still held at Lake Shelbyville.

Some people asked if it is justified to coordinate such an elaborate event to contact a few students from each school. But this competition affects more than just those who compete. Several coaches use the study materials provided for the EcoMeet in their teaching curriculum, so a large number of students are indirectly involved. Many coaches test students on the current year's subjects and pick the top students for their team, so the EcoMeet reaches out to students who may pursue a career in math or science.

Several coaches once participated in earlier EcoMeets as students. Other coaches say former competitors have pursued science careers.

(Pam Doty is a park ranger at Lake Shelbyville.)

Sammy is a furry little teacher

What in the world is a furry sea lion doing in a Mississippi River town? He is uniting the U.S. Army Corps of Engineers and students at South Park Elementary School in an effort to clean up the world.

Sammy the S.E.A. Lion is a partnership between Vicksburg District and the students of South Park as part of a Learn and Serve Grant from the Mississippi Department of Education. Through his monthly web report, students anywhere in the U.S. can learn about national efforts to clean up the environment, improve recycling efforts, or save our forests and creatures.

Sammy is the mascot of a growing group of South Park Elementary fourth graders whose motto is "Hey, Vicksburg! Clean up the world! Be a S.E.A. Lion!"

The S.E.A. Lions (Students for Environmental Awareness) are led by Barbara Applebaum who began an effort five years ago to teach her students not only about the environment but also to serve their community.

"We began by recycling aluminum for the Lions Club," said Applebaum, a fourth grade teacher. "That's how the students came to be called 'lions.' The first two years we only rounded up about 50 pounds, but by the third year, we collected over 2,000 pounds!"

Since their humble beginnings, the South Park S.E.A. Lions have been awarded the prestigious "Learn and Serve" federal grant through the Mississippi State Department of Education. Their efforts have grown to a full-blown recycling program involving the entire elementary school.

Their latest venture may very well be the most innovative and exciting yet for the fourth graders. Sammy the S.E.A. Lion has agreed to travel with Vicksburg District employees to locations around the U. S. and the world, informing students of the latest environmental breakthroughs. Students can visit Sammy on his own web page, created by the district, as he writes letters and sends back pictures of his latest adventure.

Sammy, in proper safety gear, gets a radiation briefing from Anthony Cappella at the Ashland 1 site. (Photo by Ken Winters, Buffalo District)

Most recently, Sammy the S.E.A. Lion visited Corps offices in Buffalo District and in upstate New York. There he saw sites that were contaminated by the making of the atomic bomb during World War II now being returned to natural conditions. Sammy's future travels will take him to Europe, the West Coast, Arkansas, and points up and down the Mississippi River.

"This is great for the students," Applebaum said. "We have a world map posted on the wall where we keep up with Sammy's travels." Sammy's adventures will be used to teach environmental awareness, geography, and computer technology.

"This program is a natural for the Corps," said Michael Logue, Public Affairs Officer for Vicksburg District, and also Sammy's Webmaster. "Sammy's a great model for what other federal agencies and corporations could do for the environment and education with just a little effort."

Teachers and students who want to visit Sammy the S.E.A. Lion can find him at his web site at http://www.mvk.usace.army.mil/pao/sammy.htm

(Michael Logue, Public Affairs Officer of Vicksburg District, wrote this article.)

Around the Corps

Black Engineer of the Year

William Brown Sr., Principal Assistant to the Deputy Commanding General for Military Programs, has been selected as the Black Engineer of the Year for Professional Achievement in Government.

Hundreds of the nation's top scientists, engineers, and technology leaders were nominated for awards presented Feb. 19 at the Baltimore Convention Center. The Engineering Deans of the Historically Black Colleges and Universities, Lockheed Martin Corporation, and the *U.S. Black Engineer and Technology* magazine sponsors the award.

Brown is the first Black engineer in the Department of Defense selected for the Senior Executive Service, and the first selected for the senior civilian position in the U.S. Army Corps of Engineers. Brown oversees an annual construction budget of $10 billion throughout the U.S. and 80 foreign countries.

Small business award

Col. Robert Crear, Vicksburg District Engineer, recently received the Secretary of the Army Small and Disadvantaged Business Utilization Award. The Under Secretary of the Army, Dr. Bernard Rostker, presented the award at the Pentagon.

Crear is the first Corps representative to earn this award. The award states that Crear demonstrated outstanding leadership in developing and implementing policies and programs that resulted in significant increases in the contracts and money awarded to small businesses, small disadvantaged businesses, women owned businesses, historically Black colleges and universities, and minority institutions.

Besides the Secretary of the Army award, Crear also received the Corps' top Award for Outstanding Support to the Small Business Program from Lt. Gen. Joe Ballard, Chief of Engineers. This award is presented to an individual from outside the Small Business Office and recognizes their work in advancing the Small Business Program.

New Geotechnical Lab leader

In a recent ceremony at the Engineer Research and Development Center (ERDC), Dr. Michael J. O'Connor became director of the Geotechnical Laboratory. The laboratory is one of eight in ERDC.

O'Connor now manages a staff of 135 and an annual research program of more than $20 million. The Geotechnical Laboratory conducts research in soil mechanics, engineering geology and rock mechanics, military pavements, earthquake engineering, geophysics, and vehicle mobility. O'Connor oversees research in three divisions and various special facilities, including the U. S. Army Centrifuge Research Center with the world's most powerful centrifuge.

Military Programs Conference

"I love you Corps, but business is business. As long as you give me the best deal, that's where I'll shop," said Jerry Thompson, Director of Construction for the U.S. Army Community and Family Support Center. He voiced one of the key messages from Northwestern Division's (NWD) bi-annual Military Programs Conference last month in Denver.

The conference drew more than 130 commanders, engineers, and facility managers who answered NWD's call to "tell it like it is."

There was some good news. NWD has frequent, face-to-face dialogues with its customers, often resulting in lower costs, improved planning, new acquisition tools, and broader leadership support for projects.

NWD's partners praised the use of DD1391 Support Teams, project manager forwards on site, a dedicated Installation Support Office (ISO), regular command visits and surveys, charrettes, and a near-perfect execution rate. "The NWD team talks to me every year," said Col. Paul Dunn, Training and Doctrine Command Engineer. "No other division does that. They stand out above the others."

Mike Bratlien of the Air Force Space Command likes having Corps on-site support. "Your PM-Forwards co-located with the installation's staff makes it easier to find the right person." And Col. Peter Topp, Fort Carson's Director of Public Works, praised NWD's ability to form long-term alliances.

But the conference wasn't all roses. Col. Fred Eng, Chief of Engineering Division at Air Force Headquarters, challenged the Corps to deliver facilities by the original contract time, keep total program cost growth to less than five percent of contract award amounts, skillfully negotiate contractor claims, and speed up financial close-out of projects.

Brig. Gen. Carl Strock, NWD Commander, promised to get projects awarded, built, and closed out. "Putting quality facilities on an installation in a timely, cost-effective manner, is the greatest form of installation support there is," he said.

Planning workshop

"We need strong planning capability to build and maintain our civil works program," Dr. James Johnson, Chief of Planning Division told more than 25 members of the Corps' senior planning leadership during the Major Subordinate Command Planning Workshop in February in Los Angeles District.

"My highest priority in working with our major subordinate commands planning chiefs is to develop a corporate action plan for hiring, training, developing, and retaining planners," said Johnson.

Robert Koplin, Planning Division Chief, and his staff hosted the event. The Corps-wide group of planners discussed hiring, training, and supplementing and retaining planning talent. The group plans to develop a curriculum for training planners, and to ressurect the Plan Formulation Workshops.

Playing in the Super Bowl

There's more than one way to play in the Super Bowl. Jonathan Davis got in by playing the viola. Davis, a natural resources manager in the Operations Branch of South Atlantic Division, performed with the orchestra during the half-time show.

"It was fantastic; a once-in-a-lifetime experience," said Davis, a 25-year veteran of playing the viola. "I've played in several symphony orchestras and some of them had good audiences. But how many times do you get to perform for 80,000 people, and millions more watching on television?"

Disney Studios produced the half-time show. Disney talent scouts attending a concert and a rehearsal of the Cobb Symphony Orchestra which Davis currently pays for, and invited several members to audition. They picked Davis as principal violist.

"We started rehearsing only about two-and-a-half weeks before the show," Davis said. Disney wrote the music especially for the show. "The music wasn't hard, but we also spent a lot of time practicing getting on and off the field. When you have all those performers, and all those lights and instruments and props, that's a production all by itself."

Davis was in the front row of the 80-member orchestra during the 20-minute show, right at the 48-yard line. Unfortunately, the performance didn't include a ticket to the Super Bowl. "We were bussed out of the stadium immediately after the show," Davis said. "But it was still a very exciting experience that I'll remember for the rest of my life."

Water safety award

Laura Castelnova, a park ranger at Cottonwood Springs Lake in Omaha District, has received the National Water Safety Congress' Award of Merit for her educational water safety presentations.

Castelnova helped plan and manage events at Cottonwood Springs Lake to teach about 70 children each year about water safety. Her water safety presentation included the basic rules of the road on water. One of the biggest draws was the little two-passenger mini-boats designed to teach water safety. Students put their knowledge to use by piloting the boats going out into the lake around buoys and back to shore.

Castelnova coordinated the use of the mini-boats and speakers, ensured groups rotated on time, worked on facility maintenance, and obtained volunteers to perform various other jobs.

225 years

Engineer designed steamboat

(This is another in a continuing series of true stories from the history of the U.S. Army Corps of Engineers to commemorate the Corps' 225th year. All material is from the History Office publication, "Historical Vignettes – Volume 2," EP 870-1-1, available on-line under USACE publications, Engineer Pamphlets, Historical.)

An Army engineer designed and built one of the most familiar and enduring symbols in American history. The classic steamboat, once a common sight on American rivers and now a classic image in movies and television, was designed by Col. Stephen Long, an engineer officer famous for his exploration of the American West.

In 1818, Long planned the building of an experimental boat, the *Western Engineer,* to transport him and a task force of scientists, naturalists, and artists as far west as possible.

The result was a steamboat designed to navigate narrow, shallow, snag-littered channels of inland rivers. It contained a particularly strong engine to provide increased power against swift currents. Another novel feature was a paddlewheel built into the stern to reduce the danger of damage from snags. The boat had a 75-by-13-foot hull with the weight of the machinery carefully distributed to permit increased maneuverability in shallow channels.

To protect the vessel, Long installed a bullet-proof pilothouse, mounted a cannon on the bow, placed howitzers along the side, and armed the crew with rifles and sabers.

In all, the *Western Engineer* was anything but a typical steamboat of its day, drawing only 19 inches of water compared to the five or six feet of most steamboats. Its basic design (shallow draft, rear paddlewheel, narrow beam, powerful engine amidships) became the prototype for western river steam vessels.

With the *Western Engineer,* Long and his crew explored the Ohio River and ascended the Mississippi and Missouri rivers into Nebraska. On its journey, Long's steamboat traveled further west than any other boat had before that time.

Quality of life

Savannah gives Fort Gordon soldiers what they need

Article by Nancy Gould
Photos by Jonas Jordan
Savannah District

In the heat of battle, soldiers need open lines of communication with their leaders and with each other. So when soldiers of the U.S. Army Signal Corps arrive, they make those communication lines available.

Fort Gordon, Ga., has been the primary home and training site for the Signal Corps and the 15th Signal Brigade since the early 1960s. The 93rd Signal Brigade, an active 1st Special Forces Command element, arrived at Fort Gordon in 1992. The 513th Military Intelligence Brigade and the 702nd Military Installation Group have also resided on the installation since the early 1990s.

Savannah District plays a major role in giving Fort Gordon's soldiers what they need. It gives the Directorate of Public Works (DPW) facilities that support training for about 3,000 students (as many as 5,000 during peak training periods) and enhances the installation's role as a power projection platform.

New barracks

Soldier quality of life is enhanced by facilities like the new barracks. During fiscal years 1999 and 2000, the district is scheduled to perform more than $95 million in design and construction work on the installation.

Public Works Division Chief Larry Brown has worked on various Savannah District projects at Fort Gordon for 13 years. The DPW has only about one-third the work-force it had 10 years ago, so Brown said he depends on Savannah District to deliver quality work. "I've worked with the Navy, the Air Force, and the Army's European Division," Brown said. "Worldwide, Savannah District is one of the best." But he admits they have had some differences. "We each have to satisfy specific requirements. If we don't disagree sometimes, someone's not doing his job."

The district's job currently involves five projects under construction and three more in the design stage.

The $17.5 million enlisted barracks facility is the district's largest ongoing military construction project on the installation. This 288-space facility consists of four barracks buildings and one soldier community building. The barracks, designed after the Army's 1+1 design standard, is on schedule and about 50 percent complete.

In May, the district completed another barracks complex and turned it over to Fort Gordon. Like the one under construction, soldiers E-4 and below share an apartment module with a kitchenette, one bedroom per occupant, individual built-in closets, and a shared bathroom.

Like a palace

"When I joined the Army many years ago, I lived in an open bay with 20 other guys," said Command Sgt. Maj. Clifford Lynch. "We had no privacy. Now everybody has his or her own room. This new facility is fantastic for the soldiers."

Privacy is important, but when soldiers gather in the common areas at the soldier community building beside the barracks, they can still experience the camaraderie shared in the days of open-bay living. Common areas have large-screen televisions and enclosed viewing areas, game rooms, spacious kitchens, and laundry facilities.

"This place is a palace compared to the barracks I lived in while stationed overseas," said Sgt. Stanley Hall, an enlisted barracks resident.

PV2 Steven Starley, a mechanic with the 513th Military Intillegence Brigade, completes a site inspection at the Consolidated Brigade Maintenance Facility.

Phase I of the Enlisted Barracks Complex gives the soldiers at Fort Gordon comfortable modern living quarters.

"The Barracks Upgrade Program (BUP) is Savannah District's biggest challenge now," said Col. Michael DeBow, Director of Public Works at Fort Gordon. "The change from two soldiers to one per living area puts us in a crunch for space. Now we're trying to get soldiers out of the three buildings left so the contractor can continue renovations. But giving up those buildings is difficult because other than training-style barracks, we have no place for permanent-party occupants."

When the $11.25 million BUP began refurbishing the seven modular-type barracks buildings, they discovered that when the buildings were built in the 1970s, the contractor made unrecorded changes to the original design. As a result, current design plans must be modified and construction delayed. Since these living areas contained slightly more than 70 square feet, instead of the 110 square feet the 1+1 design requires, the furniture dictated by the original design would not fit.

Brown said housing problems were further delayed because many tubs were damaged during installation. To speed up soldier occupancy, Earl Hothem, area engineer for Fort Gordon and Fort Bragg, N.C., negotiated with the contractor to release half of each completed building at a time. He also withheld a percentage of pay from contractor payments until the problem is resolved, which is allowed by the contract.

Despite these problems, Brown said his office plans to work with Savannah District again on building the $29 million Central Energy Plant Modernization project which the district designed.

Excellent price

According to Efrain Rosario, senior project manager for Fort Gordon, the DPW is funded by operation and maintenance (O&M) money and is under no obligation to use the district.

"With this type of funding, the DPW could ask another district do the work," said Rosario. "They don't have to come to us. But we gave them an excellent price because we want to make our services attractive."

But money is not the only reason Fort Gordon chose Savannah District. The district performs all major military construction there and has a record of delivering timely, high-quality projects. The $22 million Consolidated Brigade Maintenance Facility was completed about a year ago, on time and within budget, as was the $10 million Brigade Vehicle Maintenance Facility for the 513th Military Intelligence Brigade.

Energy conservation

Chilled water storage is an important coming project. The $2.2 million project will be built with a design/build contract awarded at the end of FY99. Construction is scheduled to be complete next summer. The Energy Conservation Improvement Program is funding the project, which should pay for itself in less than five years.

The chilled-water cooling system chills water during the night when peak demand charges are not in effect. During the day, the system retrieves the stored chilled water and uses it to cool buildings connected to the installation's central plant air-conditioning service. The water is filtered back into the tank's top level to be cooled and reused.